# This Page Is Inserted by IFW Operations and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

#### In the Claims:

Please amend Claim 3 as follows. The status of all claims is as follows:

1. (Original) A tibial augment for use with a knee joint prosthesis, comprising:

an annular member with a proximal surface, a distal surface, an outer anterior surface, an inner anterior surface, an outer posterior surface, an inner posterior surface, an inner lateral surface, an outer lateral surface, an inner medial surface and an outer medial surface;

said outer lateral surface being curved to define a continuous surface connecting said outer posterior surface and said outer anterior surface;

said outer medial surface being curved to define a continuous surface connecting said outer posterior surface and said outer anterior surface;

said outer posterior surface being a generally planer surface.

- 2. (Original) The tibial augment defined in Claim 1, wherein said annular member is sized to fit, at least partially, within a cavity formed in a proximal portion of a human tibia.
- 3. (Currently Amended) The tibial augment defined uniform thickness, whereby each outer surface of said substantially uniform in Claim 1, wherein at

least a majority portion of said annular member is of a substantially <u>uniform thickness</u>, <u>whereby each outer surface of said substantially uniform</u> thickness majority portion is spaced a substantially constant distance from each associated inner surface.

- 4. (Original) The tibial augment defined in Claim 3, wherein said inner anterior surface includes a distal/proximal extending channel therein, thereby defining a reduced thickness portion.
- 5. (Original) The tibial augment defined in Claim 4, wherein said majority portion of a substantially uniform thickness is approximately 5mm thick and said reduced thickness portion is approximately 3mm thick at the narrowest point thereof.
- 6. (Original) The tibial augment defined in Claim 1, wherein said inner anterior surface includes a distal/proximal extending channel therein, thereby defining a reduced thickness portion.
- 7. (Original) The tibial augment defined in Claim 1, wherein said annular member is composed of a tantalum based porous metal.
- 8. (Original) The tibial augment defined in Claim 1, wherein said outer posterior surface has a distal taper of less than approximately 17°.

- 9. (Original) The tibial augment defined in Claim 1, wherein said outer medial surface and said outer lateral surface each have a distal taper of between approximately 8° and approximately 30°.
- 10. (Original) The tibial augment defined in Claim 1, wherein said outer anterior surface has essentially no distal taper.
- 11. (Original) The tibial augment defined in Claim 1, further comprising a stepped distal surface, thereby defining a first distal surface and a second distal surface with a transition surface therebetween, wherein said first distal surface is located at a greater distance from said proximal surface than said second distal surface.
- 12. (Original) The tibial augment defined in Claim 11, wherein said transition surface is located midway between said outer lateral surface and said outer medial surface.
- 13. (Original) The tibial augment defined in Claim 11, wherein said transition surface is located closer to said outer lateral surface than to said outer medial surface.

- 14. (Original) The tibial augment defined in Claim 11, wherein said transition surface is located closer to said outer medial surface than to said outer lateral surface.
- 15. (Original) The tibial augment defined in Claim 1, wherein said annular member is composed of a material that is substantially transparent to provide an indication of bony contact when said annular member is used as a provisional.
- 16. (Original) The tibial augment defined in Claim 1, wherein said annular member is made of a photo-elastic material that provides an indication of bony contact when said annular member is used as a provisional.
- 17. (Original) The tibial augment defined in Claim 1, further comprising at least one set of generally lateral/medial extending grooves formed on at least two opposing inner surfaces of said annular member to facilitate insertion and removal of the tibial augment when used as a provisional.
- 18. (Original) The tibial augment defined in Claim 17, wherein said at least one set of generally lateral/medial extending grooves are formed on said inner lateral surface and said inner medial surface; and further wherein said annular member is composed of a material that is substantially transparent.

19. (Original) An implant system for use with a knee joint prosthesis, said implant system comprising:

a plurality of differently-sized tibial augments, wherein each said tibial augment is an annular member that is substantially shaped as a truncated cone with a generally oblongated oval cross-section that is symmetric about its minor axis, each of said annular members being sized to fit within a cavity of a corresponding size formed in a proximal portion of a human tibia of an appropriate size.

20. (Original) The implant system as defined in Claim 19, further comprising:

a plurality of differently-sized tibial augment pushers, with at least one pusher configured for use with each size of tibial augment, said pushers being configured and arranged for implanting each of said differently-sized tibial augments within a human tibia

- 21. (Original) The implant system as defined in Claim 20, wherein at least one pusher of said plurality of pushers is configured for use with more than one size of said differently sized tibial augments.
- 22. (Original) The implant system as defined in Claim 20, wherein each of said pushers includes:

a handle portion; and

an augment seating portion, connected to one end of said handle portion, wherein said augment seating portion is configured and arranged to seat a tibial augment of at least one particular size.

23. (Original) The implant system as defined in Claim 19, further comprising:

a plurality of differently-sized guides, with one guide being configured for use with each size of tibial augment; and

a plurality of osteotomes configured and arranged to cooperate with each of said guides, said osteotomes and said guides being configured and arranged to create an appropriately sized cavity within a proximal portion of a human tibia for implanting an appropriately sized tibial augment therein.

24. (Original) The implant system as defined in Claim 19, further comprising:

a plurality of differently-sized provisional tibial augments, with one of said provisional tibial augments corresponding in size and shape to each of said tibial augments, and each of said provisional tibial augments being composed of a material that is substantially transparent.

25. (Original) The implant system as defined in Claim 24, wherein:
each of said provisional tibial augments includes a plurality of grooves on a
plurality of inner surfaces thereof;

a plurality of differently-sized holders, configured for use with said provisional tibial augments, each of said holders including a plurality of ribs, with each of said ribs being configured and arranged to correspond to one of said grooves on said provisional tibial augment, such that an appropriately sized one of said holders is capable of holding one of said provisional tibial augments during removal of said provisional tibial augment from a cavity formed within a proximal portion of a human tibia.

26. (Original) A method of correcting for tibial defects during knee replacement surgery:

preparing an existing cavity, or creating a cavity in a proximal portion of a human tibia;

inserting a tibial augment within said cavity; and attaching a tibial portion of a knee joint prosthesis to said tibial augment.

27. (Original) The method of correcting for tibial defects, as defined in Claim 26, further comprising the step of: selecting an appropriately sized tibial augment from a group of differently sized tibial augments.

28. (Original) The method of correcting for tibial defects, as defined in Claim 26, wherein:

during said step of preparing or creating said cavity, a guide and a set of osteotomes are utilized to form said cavity, said guide including a slot with different portions thereof configured for accepting different osteotomes of said set of osteotomes.

- 29. (Original) The method of correcting for tibial defects, as defined in Claim 26, further comprising the step of inserting a second tibial augment within said cavity, wherein said second tibial augment is stacked upon said tibial augment originally inserted within said cavity.
- 30. (Original) The method for correcting for tibial defects, as defined in Claim 26, wherein prior to said step of inserting a tibial augment within said cavity, a provisional tibial augment is temporarily inserted into said cavity.
- 31. (Original) The method for correcting for tibial defects, as defined in Claim 30, further comprising the step of using said provisional tibial augment as a tamp to tamp a bone graft into position.
- 32. (Original) A pusher for use with a tibial augment, said pusher comprising:

a handle portion; and

an augment seating portion, connected to one end of said handle portion, wherein said augment seating portion is configured and arranged to seat at least one particularly sized tibial augment.

### 33. (Original) The pusher as defined in Claim 32, wherein:

said augment seating portion includes a head portion and a platform portion, which are attached together, and wherein said platform portion is attached to said handle portion of said pusher;

said platform portion including a generally planar surface at an interface between said platform portion and said head portion; and

said head portion including a plurality of tapered surfaces, such that a crosssection of said head portion decreases with increasing distance from said generally planar surface of said head portion.

34. (Original) An osteotome used for creating a cavity in a bone, said osteotome comprising:

a handle portion; and

a cutting portion attached to said handle portion, wherein said cutting portion includes:

a tapered edge at a distal end thereof;

at least one stop for hindering penetration of said cutting portion into said bone past a predetermined distance.

- 35. (Original) The osteotome as defined in Claim 34, wherein said at least one stop includes two stops, with one of said stops being configured for hindering penetration of said cutting portion into said bone past a first predetermined distance and with the other one of said stops being configured for hindering penetration of said cutting portion into said bone past a second predetermined distance.
- 36. (Original) The osteotome as defined in Claim 35, wherein: one of said stops is configured to cooperate with a guide of a first size and the other of said stops is configured to cooperate with a guide of a second size, where said second size is different from said first size.
- 37. (Original) The osteotome as defined in Claim 34, wherein said cutting portion is curved into an arc shape.
- 38. (Original) The osteotome as defined in Claim 35, wherein:
  said cutting portion is generally planar, with said plane defined by said
  generally planar cutting portion being situated at an oblique angle with respect to a
  longitudinal axis of said handle portion.

- 39. (Original) The osteotome as defined in Claim 35, wherein said osteotome is configured and sized to create a cavity in a proximal portion of a human tibia.
- 40. (Original) A guide for use with at least one osteotome when creating a cavity in a bone, said guide comprising:

an upper surface;

a generally planar lower surface;

a generally C-shaped slot extending from said upper surface to said generally planar lower surface; and

a securing arrangement to secure said guide to the bone within which the cavity is being created, said securing arrangement securing said guide such that said generally planar lower surface faces the bone within which a cavity is being created.

41. (Original) The guide as defined in Claim 40, wherein said securing arrangement includes:

an aperture with a central axis extending in a direction generally perpendicular to said generally planar lower surface, wherein said aperture is configured to accept an intramedullary rod.

42. (Original) The guide as defined in Claim 41, wherein said securing arrangement further includes:

a threaded hole extending in a direction generally transverse to said plane of said generally planar lower surface; and

a setscrew configured to extend through said threaded hole and to contact the intramedullary rod such that said guide is retained in position with respect to the intramedullary rod within said aperture.

- 43. (Original) The guide as defined in Claim 41, wherein said aperture is generally triangular-shaped, and said aperture extends completely through said guide from said generally planar lower surface to said upper surface.
- 44. (Original) The guide as defined in Claim 40, wherein portions of said generally C-shaped slot are tapered inwardly toward said generally planar lower surface.
- 45. (Original) A system used for creating a cavity in a proximal portion of a human tibia for use prior to implanting a knee joint prosthesis, said system comprising:

a guide that includes:

an upper surface;

a lower surface;

a generally C-shaped slot extending from said upper surface to said lower surface; and

a securing arrangement to secure said guide to the bone within which the cavity is being created, said securing arrangement securing said guide such that said lower surface faces the bone within which the cavity is being created; and

a set of osteotomes configured and arranged to be inserted within said generally C-shaped slot of said guide.

- 46. (Original) The system according to Claim 45, wherein each of said osteotomes within said set includes at least one stop for hindering penetration of a cutting portion of said osteotome into said bone past a predetermined distance by contacting a surface of said upper surface of said guide adjacent to said C-chapped slot.
- 47. (Original) The system as defined in Claim 46 wherein said at least one stop on each of said osteotomes within said set includes two stops, with one of said stops being configured for hindering penetration of said cutting portion into said bone past a first predetermined distance and with the other one of said stops being configured for hindering penetration of said cutting portion into said bone past a second predetermined distance.
- 48. (Original) A holder for inserting and/or removing a provisional augment to/from a cavity in a bone, said holder comprising:
  - a body portion defining a longitudinal axis;
  - a pair of legs extending from said body portion;

a finger connected to each of said legs; and

a rib extending outwardly from each of said fingers, each of said ribs extending in a direction generally perpendicular to said longitudinal axis of said body portion, wherein said ribs are configured and arranged to correspond to grooves on an inner surface of a provisional augment.

- 49. (Original) The holder as defined in Claim 48, further comprising a pair of stops configured and arranged to be seated upon a proximal surface of the provisional augment, whereby said stops serve as locators for properly locating said ribs of said holder with respect to the grooves of the provisional augment.
- 50. (Original) The holder as defined in Claim 48, wherein said pair of legs comprises a pair of flexible legs, such that application of a force upon outer surfaces of said legs allows for said ribs to be disengaged from the grooves on the inner surface of the provisional augment without significantly altering the location of the provision augment.
  - 51. (Original) The holder as defined in Claim 48, wherein: each of said legs is a relatively rigid member; and

each of said fingers is attached to one of said legs such that said fingers are movable with respect to said legs, whereby movement of said fingers with respect to said

legs allows for said ribs to be disengaged from the grooves on the inner surface of the provisional augment without significantly altering the location of the provision augment.

- 52. (Original) The holder as defined in Claim 51, wherein a distance between said fingers is adjustable to permit said holder to be used with provisional augments of different sizes.
- 53. (Original) The holder as defined in Claim 51, wherein said fingers are attached to said legs via a threaded shaft that is threaded in one direction where one of said fingers is connected thereto and in an opposite direction where the other of said fingers is connected thereto, whereby when said threaded shaft is rotated in a first direction with respect to said legs, said fingers are moved towards each other and when said threaded shaft is rotated in an opposite direction with respect to said legs, said fingers are moved away from each other.
- 54. (Original) The holder as defined in Claim 51, further comprising: a threaded shaft that extends from one of said legs to the other of said legs and is rotatable with respect to said legs and connects said fingers to said legs, said threaded shaft being threaded in one direction where one of said fingers is connected thereto and in an opposite direction where the other of said fingers is connected thereto; and

a secondary shaft that extends from one of said legs to the other of said legs, with said fingers being movably attached thereto.

55. (Original) The holder as defined in Claim 54, wherein said secondary shaft includes a slight taper from a center thereof outwardly towards each of said legs.